

[0190] Moreover, it is the intent of the present disclosure that personal information data should be managed and handled in a way to minimize risks of unintentional or unauthorized access or use. Risk can be minimized by limiting the collection of data and deleting data once it is no longer needed. In addition, and when applicable, including in certain health related applications, data de-identification can be used to protect a user's privacy. De-identification may be facilitated, when appropriate, by removing identifiers, controlling the amount or specificity of data stored (e.g., collecting location data at city level rather than at an address level), controlling how data is stored (e.g., aggregating data across users), and/or other methods such as differential privacy.

[0191] Therefore, although the present disclosure broadly covers use of personal information data to implement one or more various disclosed embodiments, the present disclosure also contemplates that the various embodiments can also be implemented without the need for accessing such personal information data. That is, the various embodiments of the present technology are not rendered inoperable due to the lack of all or a portion of such personal information data. For example, content can be selected and delivered to users based on aggregated non-personal information data or a bare minimum amount of personal information, such as the content being handled only on the user's device or other non-personal information available to the content delivery services.

[0192] The present document provides illustrations and descriptions, but is not intended to be exhaustive or to limit the scope of the invention to the precise form disclosed. Modifications and variations are possible in light of the above teachings or may be acquired from practice of various implementations of the present disclosure.

What is claimed is:

1. A method comprising:
  - receiving floor plan data corresponding to at least one of a location, dimensions, or orientation of one or more walls defining at least one room of a building;
  - receiving sensor data corresponding to detected activity within the at least one room of the building;
  - determining a type of the at least one room of the building based on the detected activity; and
  - modifying the floor plan data to include the determined type of the at least one of the one or more rooms, wherein a visual representation of the floor plan data is operable to be output on a display device.
2. The method of claim 1 further comprising:
  - determining an area of the at least one room of the building,
  - wherein determining the type of the at least one room is further based on the area of the at least one room.
3. The method of claim 2 wherein the floor plan data includes a plurality of rooms, and wherein determining the type of the at least one room is further based on the location of the one room relative to locations of the remaining plurality of rooms.
4. The method of claim 1 wherein the sensor data includes image data, and wherein the method further comprises:
  - tracking a movement of an object in the one or more rooms,
  - wherein determining the type of the at least one of the one or more rooms is further based on at least one of:

- an amount of time the object has spent in the one or more rooms, the amount of time based on the tracked movement of the object; and

- a traffic pattern of the object in the one or more rooms, the traffic pattern of the object based on the tracked movement of the object.

5. The method of claim 1 wherein the sensor data includes audio data, and wherein the method further comprises:

- tracking a movement of an object in the one or more rooms,

- wherein determining the type of the at least one of the one or more rooms is further based on at least one of:

- an amount of time the object has spent in the one or more rooms, the amount of time based on the tracked movement of the object; and

- a traffic pattern of the object in the one or more rooms, the traffic pattern of the object based on the tracked movement of the object.

6. The method of claim 1 wherein the sensor data includes electromagnetic interference (EMI) data, and wherein the method further comprises:

- determining a type of the object based on the EMI data;
- tracking a movement of an object in the one or more rooms,

- wherein determining the type of the at least one of the one or more rooms is further based on at least one of:

- an amount of time the object has spent in the one or more rooms, the amount of time based on the tracked movement of the object; and

- a traffic pattern of the object in the one or more rooms, the traffic pattern of the object based on the tracked movement of the object.

7. The method of claim 6 wherein determining a type of the object based on the EMI data includes determining a unique digital identifier (unique ID) of the object.

8. The method of claim 1 wherein the digital floor plan data includes a location of a powered appliance within the at least one room of the building,

- wherein the sensor data includes power data from the powered appliance, and

- wherein determining the type of the at least one room of the building is further based on the power data of the powered appliance.

9. The method of claim 8 wherein the power data includes at least one of:

- a power usage profile;
- a power frequency profile;
- a power factor; and
- inductive or reactive loads.

10. The method of claim 1 wherein the digital floor plan data includes a location of a host unit disposed within one of the one or more walls,

- wherein the sensor data includes accelerometer data from the host unit, the accelerometer data including data corresponding to vibrations within the wall that the host unit is disposed in, and

- wherein the determining the type of the at least one room of the building is further based on characteristics and a location of the detected vibrations.

11. A non-transitory computer-program product tangibly embodied in a machine-readable non-transitory storage medium that includes instructions configured to cause one or more processors to perform operations including: